

REMARKS**Summary of Claim Amendments**

Upon entry of the response and remarks, claims 1 and 9 are amended, and claims 1 and 4-13 remain pending. Of the pending claims, claims 1, 8, and 9 are independent. Support for the amendments to the claims can be found, for example, in the specification at page 6, lines 3-21. Applicants submit that no new matter is added.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Summary of Telephone Interview - September 28, 2006

Applicants thank Examiner Tentoni for taking the time to participate in a telephone interview on September 28, 2006, with Applicants' Representative, Wesley Nicolas (USPTO Reg. No. 56,129).

During the interview, Applicants discussed the rejections noted in the Office Action dated July 28, 2006. Specifically, Applicants provided arguments as to why the 35 U.S.C. § 103 rejection and double-patenting rejection should be withdrawn. In addition, Applicants discussed the presently amended claims, and their differences between the cited documents. Applicants submit that Examiner Tentoni's characterization of the substance of the interview as noted in the

Interview Summary Form mailed October 2, 2006 is complete, and no further supplementation or clarification is required.

RESPONSE TO CLAIM REJECTIONS

1. Response to Rejections under 35 U.S.C. § 103(a)

The Office Action contains the following rejections under 35 U.S.C. § 103(a):

- (a) Claims 1, 4-6 and 9-12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over JAMALABAD (U.S. Pat. No. 6,682,684);
- (b) Claims 1, 4-6 and 9-12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over HIGASHI (JP 2002-115004 A);
- (c) Claims 7, 8 and 13 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over either JAMALABAD or HIGASHI, as applied to claims 1, 4-6 and 9-12 above, and further in view of EXNER (DE 19953000 A1).

Applicants respectfully request withdrawal of the obviousness rejections in view of the following remarks. Applicants respectfully submit that a *prima facie* case of obviousness is not established by JAMALABAD alone (claims 1, 4-6 and 9-12); HIGASHI alone (claims 1, 4-6 and 9-12); or JAMALABAD or HIGASHI, and further in view of EXNER (claims 7, 8 and 13) for at least the following reasons. A *prima facie* case of obviousness requires:

- a) the presence of all claimed elements,

- b) the motivation to combine the separate reference teachings, and
- c) a reasonable expectation of success.

The Office Action fails to establish any of these requirements.

(a) The combination of cited documents fails to disclose all elements of the present claims

First, regarding the presence of all claimed elements, Applicants respectfully submit that the requirement that all claimed elements be taught or suggested in the cited documents, and this requirement has not been met.

For instance, with regard to rejections (a) or (b) (claims 1, 4-6 and 9-12), the single document of JAMALABAD or HIGASHI would not teach or suggest at least “accepting a hanging portion of an excess portion by the concave portion surface of the lower part of the sintered block” as presently claimed in claims 1 and 9. Therefore, in view of at least the foregoing remarks, Applicants respectfully request withdrawal of the 35 U.S.C. § 103 rejection of claims 1, 4-6 and 9-12.

With regards to rejection (c), (claims 7, 8 and 13), in addition to the arguments regarding JAMALABAD or HIGASHI as noted above, Applicants respectfully submit that the combination of EXNER with either JAMALABAD or HIGASHI is improper, as EXNER fails to correct the deficiencies of JAMALABAD or HIGASHI.

The Office Action states that EXNER is combined with either JAMALABAD or HIGASHI because EXNER teaches “as an embodiment a variable-contour

mask (i.e., a mask having a desired aperture size and desired outline) to produce a desired three-dimensional object.” (Office Action dated 7/28/06, page 6).

However, Applicants note numerous differences between Applicants’ claims and the combination of JAMALABAD or HIGASHI with EXNER. For example, EXNER does not appear to disclose at least the feature wherein “the mask having an aperture that is approximately equal to the outline of the sintered block,” as in claims 7 and 13. Further, EXNER does not appear to teach at least the feature of “irradiating an optical beam along an outline of predetermined portion to be sintered,” as in claim 8. Therefore, EXNER does not cure the deficiencies of JAMALABAD or HIGASHI.

In contrast with the present claims, Applicants note that EXNER disclose a fixed, moving, or variable-contour mask, and irradiation of the optical beam in a zig-zag pattern. Therefore, even though EXNER may disclose a variable contour mask, the optical beam is irradiated in a zig-zag pattern, and this is not the same as “irradiating an optical beam along an outline of a predetermined portion...” as presently claimed. Thus, Applicants respectfully submit that EXNER actually teaches away from the present claims, and cannot be properly combined with either JAMALABAD or HIGASHI to arrive at the claimed recitations of claims 7, 8 and 13. Thus, EXNER does not correct the deficiencies of JAMALABAD or HIGASHI, and Applicants respectfully request withdrawal of the 35 U.S.C. § 103 rejection of claims 7, 8 and 13.

(b) The Cited Documents Fail to Provide Motivation to Arrive at the Claimed Invention

Second, regarding motivation to combine the separate reference teachings, to properly establish a *prima facie* case of obviousness, assuming, *arguendo*, that the rejection is based on a proper combination, the combined teachings must disclose all of the recitations of the rejected claims and the cited document(s) must contain some suggestion or motivation for such combination. Applicants respectfully submit that the documents cited in rejections (a), (b), and (c) fail to provide specific motivation to arrive at the claimed invention, especially in view of the single document cited in rejections (a) and (b). Applicants respectfully submit that mere statements that it would have been obvious to one of ordinary skill in the art without pointing to specific support in the cited document is not sufficient to satisfy the *prima facie* case of obviousness.

Therefore, for at least the foregoing reasons, Applicants respectfully submit that the presently claimed three dimensional object would not have been obvious in view of the documents cited in rejections (a), (b), and (c). Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103 rejections.

(c) There would have been no expectation of success

Finally, despite the assertions in the Office Action, there would have been no expectation of success of achieving the specific recitations of the present

claims. There is no reason to believe that Applicant's particularly claimed three dimensional object would have resulted by combining the documents as noted in rejections (a), (b), or (c).

Regarding rejections (a) – (c), Applicants note that the presently claimed invention provides unexpected results such as the prevention of the excess sintered portion, and shortened removing process time as noted in the specification at page 9, lines 10-20. Therefore, Applicants respectfully submit that such unexpected results would not have been obvious in view of the disclosure of JAMALABAD or HIGASHI (rejections (a) or (b), respectively), or JAMALABAD or HIGASHI, and further in view of EXNER (rejection (c)).

Therefore, Applicants respectfully submit that the presently claimed three dimensional object would not have been obvious in view of the documents cited in rejections (a) – (c). Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103 rejections.

2. Response to Obviousness-type Double Patenting Rejection

Applicants respectfully request withdrawal of the obviousness-type double patenting rejection of claims 1 and 4-13 in view of the following remarks.

Applicants respectfully submit that ABE does not claim at least the recitations of an "inorganic material"¹ as in claims 1, 8 and 9, or the recitation

¹ Applicants note that it inadvertently argued in its previous response that ABE does not claim an "organic material," when Applicants intended to argue that ABE does not claim an "inorganic material."

wherein "the sides of the sintered block including a concave portion," as in claims 1 and 9. Moreover, the Office Action fails to provide motivation as to why the claimed recitations not claimed in ABE would have been obvious. Therefore, Applicants respectfully request withdrawal of the obviousness-type double patenting rejection of claims 1 and 4-13.

Application is Allowable

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

Authorization to Charge Deposit Account

If for any reason the necessary fees are not associated with this file, the undersigned authorizes the charging of any necessary fees not explicitly identified, to Deposit Account No. 19-0089 in order to maintain pendency of this application.

CONCLUSION

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipates or renders obvious the Applicants' invention, as recited in each of claims 1 and 4-13. In addition, the applied documents of record have been discussed and

distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Should there be any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,
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